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# IMPULSE-NMR STUDY OF POLYVINYL CHLORIDE–GLYCEROL SYSTEMS*

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Three systems of PVC–glycerol, prepared by various methods have been studied, namely powders, pressed and milled samples. In the case of the powders a proportion of the glycerol was found to be sorbed on the surfaces of supermolecular structures whose size changed reversibly with the temperature. The other glycerol fills the vacancies between the supermolecular structures and form a pseudo-free phase. A molecular exchange takes place between these groups of molecules. Glycerol fills the vacancies with linear dimensions of $10^{-7}$–$10^{-6}$ m in the pressed samples while it is distributed in the milled samples as small associates in the polymer network and will move in strict cooperation with the macromolecular segments.

The so-called structural plastification, in contrast with the molecular [1] has been studied only by the thermomechanical method [2, 3] if one overlooks the work by Chenborisova and coworkers [4], in which NMR was used at room temperature and the samples had been prepared by a single method. The aim of this work was the detailed impulse-NMR study of the state of glycerol-containing compositions in a wide temperature range as a function of the preparation method.

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